

**REMARKS/ARGUMENTS**

Reexamination of the captioned application is respectfully requested.

**A. SUMMARY OF THIS AMENDMENT**

By the current amendment, Applicants basically:

1. Editorially amend the specification.
2. Cancel claims 39 - 76 without prejudice or disclaimer.
3. Add new claims 77-107.
4. Respectfully traverse all prior art rejections.
5. Advise the Examiner of the simultaneous filing of a Petition to Extend.

**B. PATENTABILITY OF THE CLAIMS**

Claims 39-49, 54-62 and 65 stand rejected under 35 USC 102(b) as being anticipated by U.S. Publication 2004/0189515 to Vannucci. Claims 50-53, 63-64 and 74-76 stand rejected under 35 USC §103(a) as being unpatentable over U.S. Publication 2004/0189515 to Vannucci as applied to claim 39 above, and further in view of U.S. Publication 2004/0239558 to Geier. With respect to the new claims, all prior art rejections are respectfully traversed for at least the following reasons.

Contrary to the allegations of the office action, U.S. Publication 2004/0189515 to Vannucci does not teach or suggest recalculating (if the quality measure does not fulfill the first predefined quality criterion) the location of the mobile terminal (with added correction for error in at least one parameter representing a parameter measured at the mobile terminal). This limitation, or a structural analogue, resides in each of the independent claims. As explained below, the objectives and operation of U.S. Publication 2004/0189515 to Vannucci are entirely different from Applicant's claimed subject matter, so that Vannucci does not teach, e.g., the limitation of recalculating the location of the mobile terminal.

The purpose of Vannucci 's system 100 "is to enable a mobile terminal 400 to determine its own position in an urban environment where GPS systems fail because the GPS signals are too weak, or a sufficient number of GPS satellites cannot be observed". *See, e.g., Vannucci page 2, paragraph [0019].* Accordingly, Vannucci 's system 100 "enables the mobile terminal 400 to determine its own position from signals obtained from both the GPS satellites and a DBS satellite"<sup>1</sup>. *See, e.g., Vannucci page 2, paragraph [0020].* Yet use of DBS signals is not straightforward, since (as explained, e.g., in Vannucci page 2, paragraph [0020]) "the DBS signals are not synchronized with the GPS satellites, are not designed for timing and positioning, and generally are not under control of the satellite positioning system".

Thus, although Vannucci purports to use a pseudorange for a DBS satellite in place of one pseudorange for a GPS satellite for the purpose of achieving the necessary number of pseudoranges (*see, e.g., Vannucci page 4, paragraph [0055]*), the actual DBS signal obtained and recorded by the Vannucci mobile terminal exhibits a time offset (*see, e.g., Vannucci page 5, paragraph [0062]*). A time  $t_0$  (representing the time of arrival of the DBS signal in the mobile terminal) is determined by the mobile terminal using both a time-stamped received DBS signal and an assistance message from stationary server 200 (*see, e.g., Vannucci page 5, paragraphs [0061]- [0067]*). Yet this time  $t_0$  is corrupted by various sources of error, and cannot be used as is for exact position fixes. In order to correct for the various sources of error, the mobile terminal subtracts a stored calibration term  $t_c$  (*see, e.g., Vannucci page 5, paragraphs [0068]+*).

The citations in the office action seem particularly directed to the offset of the DBS signal and calibration term for the DBS calculation. Yet in Vannucci it is only the DBS signal that has the offset and for which the calibration term is determined. Vannucci 's maintaining and updating of a calibration term for the DBS calculation does not teach or suggest e.g., the limitation of recalculating the location of the mobile terminal. For

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<sup>1</sup> A DBS satellite is described in e.g., Vannucci page 2, paragraph [0007].

example, as explained by Vannucci Fig. 6 and Fig. 7, Vannucci 's maintaining and updating of a calibration term for the DBS calculation is preparatory even to Vannucci calculation of the location of the mobile terminal, and thus does not teach or suggest (among other things) the claimed recalculation.

Fig. 6 of Vannucci shows that Vannucci's receipt and use of DBS signals, including the determination of  $t_0$  and the calibration term  $t_c$ , all precede step 690 (the step of determining the exact position). Moreover, Vannucci updating of the calibration term  $t_c$  occurs only when a conventional GPS position fix can be obtained (see Fig. 7), and updating of the calibration term does not involve a recalculation of a previously recalculated position (since, e.g., Vannucci step 690 is not re-performed as a result of the  $t_c$  update).

Thus, it is clear that Vannucci is preoccupied with obtaining and correcting a time of arrival value for a DBS signal, which is used for just one pseudorange component of Vannucci's hybrid DBS/GPS position determining system. The Vannucci operations cited in the office action all occur prior to ultimate relocation of the mobile station. While Vannucci may calibrate for DBS and update its calibration, these DBS-related operations are all preparatory to and/or distinct from the eventual location calculation. The passages cited by the office action thus have nothing to do with comparison of a location calculation to a quality measure and a resultant recalculation using a transmission time offset parameter.

Applicant feels that irrelevance of U.S. Publication 2004/0189515 to Vannucci is further attested by Vannucci page 3, paragraph [0037], which states that "The present system is in contrast with differential GPS (DGPS). The goal of DGPS is to improve accuracy by correcting measurement errors, whereas the hybrid system also uses signals from non-GPS satellites in place of GPS satellites".

Applicant has stressed distinctions of Applicant's independent claims. Other Patentable features reside in various and numerous dependent claims, but in view of the

patentability of the independent claims such other patentable features need not be elaborated (although Applicant reserves the future right to do so should such become necessary).

**C. MISCELLANEOUS**

In view of the foregoing and other considerations, all claims are deemed in condition for allowance. A formal indication of allowability is earnestly requested.

The Commissioner is authorized to charge the undersigned's deposit account #14-1140 in whatever amount is necessary for entry of these papers and the continued pendency of the captioned application.

Should the Examiner feel that an interview with the undersigned would facilitate allowance of this application, the Examiner is encouraged to contact the undersigned.

Respectfully submitted,

**NIXON & VANDERHYE P.C.**

By:           /H. Warren Burnam, Jr./            
H. Warren Burnam, Jr.  
Reg. No. 29,366

HWB:lsh  
901 North Glebe Road, 11th Floor  
Arlington, VA 22203-1808  
Telephone: (703) 816-4000  
Facsimile: (703) 816-4100